C.) AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings of claims in the Application.

Claims 1 – 19 (cancelled)

Claim 20 (Currently Amended): A superalloy article comprising:

an external surface and an internal passage therein defined by an internal surface;

a coating layer~~, selected from the group of alloys consisting of~~ comprising β-NiAlCrZr ~~base~~ having a weight percent of Al at a surface of the coating layer of about 27 weight percent~~, MCrAlX, and a diffusion aluminide,~~ on at least a first portion of the external surface of the superalloy article; and

a diffusion aluminide coating on at least a portion of the internal surface and on any remaining portion of the external surface of the superalloy article, the diffusion aluminide coating applied using a aluminum vapor phase deposition process performed using a fluorine-containing activator selected from the group consisting of AlF_3, CrF_3, NH_4F, and combinations thereof, at a rate in the range of about 0.036 mols of fluorine per ft^3/hr of transport gas to about 0.18 mols of fluorine per ft^3/hr of transport gas, at a temperature in the range of about 1350°F to about 1925°F, using a transport gas selected from the group consisting of argon, nitrogen, hydrogen, and combinations thereof, the transport gas being provided at a flow rate in the range of about 20 ft^3/hr to about 120 ft^3/hr for a period of time in the range of about 2 hours to about 10 hours.

Claim 21 (Currently Amended): A turbine engine component comprising:

a superalloy substrate, comprising a surface, the surface having been low in aluminum content immediately after initial manufacture of the superalloy article;

a first aluminum-rich layer being present on a first portion of the surface, the first aluminum-rich layer comprising β-NiAlCrZr having a weight percent of Al at a surface of the first aluminum-rich layer of about 27 weight percent, the first aluminum-rich layer having been applied to the first portion of the surface after initial manufacture, the first aluminum-rich layer making the first portion of the surface aluminum-rich and forming an aluminum-rich surface on the first portion of the surface, with a second portion of the surface remaining low in aluminum content after the application of the aluminum-rich layer to the first portion of the surface; and

a second aluminum-rich layer being present on a second portion of the surface, the second aluminum-rich layer having been applied to the second portion of the surface after the application of the first aluminum-rich layer, the second aluminum-rich layer having been applied by exposing both the first portion of the surface and the second portion of the surface to an aluminum-rich atmosphere, such exposure depositing aluminum onto and diffusing aluminum into the second portion of the surface without the already aluminum-rich first portion of the surface undergoing a phase change and without depositing sufficient aluminum onto and sufficient aluminum into the first portion of the surface to adversely affect the coating growth potential and mechanical properties of the first aluminum-rich layer.

Claims 22 – 28 (Cancelled)

Claim 29 (Previously Presented): The superalloy article of claim 20, wherein a donor material for the aluminum vapor phase deposition process is selected from the

group consisting of aluminum, chromium-aluminum alloys, cobalt-aluminum alloys, iron-aluminum alloys, and combinations thereof.

Claim 30 (Previously Presented): The superalloy article of claim 29, wherein the chromium-aluminum alloy is about 70 weight percent chromium and about 30 weight aluminum, wherein the cobalt-aluminum alloy is about that is about 50 weight percent cobalt and 50 weight percent aluminum, wherein the iron-aluminum alloy is about 40 weight percent iron and about 60 weight percent aluminum, and wherein the titanium-aluminum alloy is about 50 weight percent titanium and about 50 weight percent aluminum.

Claim 31 (Previously Presented): The superalloy article of claim 20, wherein the aluminization process is run for a period of about 6 hours.

Claim 32 (Previously Presented): The turbine engine component of claim 20, wherein the component is a turbine blade.

Claim 33 (Previously Presented): The superalloy article of claim 20, wherein the diffusion aluminide of the coating layer is applied using a diffusion aluminide process selected from the group consisting of a line-of-sight diffusion aluminide process, a non-line-of-sight diffusion aluminide, a pack diffusion aluminide, and a slurry diffusion aluminide process.

Claim 34 (Previously Presented): The superalloy article of claim 33, wherein the applied coating diffusion aluminide vapor phase deposition process is performed for a

period of time of about 6 hours.

Claim 35 (Previously Presented): The superalloy article of claim 20, wherein the fluorine-containing activator is AlF_3.

Claim 36 (Previously Presented): The superalloy article of claim 20, wherein the transport gas is hydrogen.

Claim 37 (Previously Presented): The superalloy article of claim 33, wherein the fluorine-containing activator is AlF_3.

Claim 38 (Previously Presented): The superalloy article of claim 33, wherein the transport gas is hydrogen.

Claim 39 (Cancelled)

Claim 40 (Previously Presented): The superalloy article of claim 29, wherein the article is a turbine blade.

Claim 41 (Previously Presented): The superalloy article of claim 30, wherein the article is a turbine blade.

Claim 42 (Previously Presented): The superalloy article of claim 31, wherein the article is a turbine blade.

Claim 43 (Previously Presented): The superalloy article of claim 35, wherein the article is a turbine blade.

Claim 44 (New): A superalloy article comprising:

an external surface and an internal passage therein defined by an internal surface;

a coating layer, selected from the group of alloys consisting of β-NiAl-base, MCrAlX, and a diffusion aluminide, on at least a first portion of the external surface of the superalloy article; and

a diffusion aluminide coating on at least a portion of the internal surface and on a second shadowed portion of the external surface of the superalloy article, the diffusion aluminide coating applied using an aluminum vapor phase deposition process performed using a fluorine-containing activator selected from the group consisting of AlF_3, CrF_3, NH_4F, and combinations thereof, at a rate in the range of about 0.036 mols of fluorine per ft^3/hr of transport gas to about 0.18 mols of fluorine per ft^3/hr of transport gas, at a temperature in the range of about 1350°F to about 1925°F, using a transport gas selected from the group consisting of argon, nitrogen, hydrogen, and combinations thereof, the transport gas being provided at a flow rate in the range of about 20 ft^3/hr to about 120 ft^3/hr for a period of time in the range of about 2 hours to about 10 hours.

Claim 45 (New): A turbine engine component comprising:

a superalloy substrate, comprising an external surface and an internal surface, the surface having been low in aluminum content immediately after initial manufacture of the superalloy article;

a first aluminum-rich layer being present on a first portion of the external surface, the first aluminum-rich layer having been applied to the first portion of the external surface after initial manufacture, the first aluminum-rich layer making the first portion of the external surface aluminum-rich and forming an aluminum-rich surface on the first portion of the external surface, with a second shadowed portion of the external surface and the internal surface remaining low in aluminum content after the application of the aluminum-rich layer to the first portion of the surface; and

a second aluminum-rich layer being present on the second shadowed portion of the external surface and the internal surface, the second aluminum-rich layer having been applied to the second shadowed portion of the external surface and the internal surface after the application of the first aluminum-rich layer, the second aluminum-rich layer having been applied by exposing both the first portion of the external surface, the second shadowed portion of the external surface, and the internal surface to an aluminum-rich atmosphere, such exposure depositing aluminum onto and diffusing aluminum into the second shadowed portion of the external surface and the internal surface without the already aluminum-rich first portion of the external surface undergoing a phase change and without depositing sufficient aluminum onto and sufficient aluminum into the first portion of the external surface to adversely affect the coating growth potential and mechanical properties of the first aluminum-rich layer.